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ABSTRACT

The central problem of this study was to describe the educational environment of Oklahoma elementary schools as perceived by pupils who attend those schools, and to determine if schools with differing characteristics differ in their educational environments. Eleven thousand pupils from 373 classrooms in 110 schools throughout Oklahoma participated in the study. Variables examined were: practicality, community, awareness, propriety, and scholarship. The instrument utilized to measure pupils' perceptions was the Elementary School Environment Survey (ESES). The most significant findings were: 1) Schools in middle/high socioeconomic class settings (non Title I) have a significantly more scholarly environment; 2) Rural school students perceive the environment as more polite and considerate than do students attending urban schools; 3) Self-contained classrooms differ significantly in the educational environment dimension of practicality; and, 4) Educational environments do not differ significantly according to sex of principal, age variance of faculty, or enrollment size. Since there were only three significant differences found out of a possible 35, it may be that the wrong variables were used to identify the real differences between schools that professional educators intuitively know exist. (Author/JLB)

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Donovan Moore

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Stillwater, Oklahoma

May 31, 1972

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
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ELEMENTARY SCHOOL CHILDREN'S PERCEPTIONS OF THE EDUCATIONAL ENVIRONMENT[1]

By

Donovan Moore and Russell Dobson

An educational philosophy which embraces the belief that schools should be for children implies that what children think and perceive is important. Concommitantly, to limit what we know about the reality that exists in a classroom is to limit what can be done to move in the direction of creating more optimum conditions for children both in the realm of learning and humaneness. As pointed out by Stern (1970), there may be some disparity between the perceived situation and the veridical one; however, for the pupils themselves the perception is the reality.

Elementary school environments are as different and complex as children who attend elementary schools. When educators understand the influence of educational environments upon the school life of children, then it will be possible to modify the educational environment to enhance, reinforce, and support the total growth of children rather than to restrict and/or constrain this growth.

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During the past decade there has been an upsurge in the amount of research done on human environments. Most investigations designed to explain environments are centered on describing conditions and forces existing in homes (King and Kerber, 1968; Stabler, 1969), in colleges and universities (Pace and Stern, 1958; Thistlewaite, 1959; Davis, 1962; Marks, 1967; Feldman, 1971), and to a more limited degree, in secondary schools (Anderson and Walberg, 1967; Tuckman, 1970). Few of the investigations were directly concerned with the atmosphere of elementary schools (Appleberry, 1969). Investigations made from the vantage point of the child's perceptions are almost nonexistent (Berreman, 1967; Glick, 1970).

Bloom (1964) defines environment as "the conditions, forces, and external stimuli which impinge upon the individual. These may be physical, social, as well as intellectual forces and conditions." The range of environments goes from the most immediate social interactions to the more remote cultural and institutional forces. Bloom regards the environment as providing a "network of forces and factors which surround, engulf, and play on the individual." (Bloom, 1964, p. 187)

Sinclair (1970) points out the need to consider school environments:

> Up to now, there has been considerable research on individual differences, but relatively little has been done to measure differences among environments with which individuals interact. Different environments affect children in different ways, and to ignore variation in school climates is to limit our understanding of the various ways students think and feel.

In any event, research on human environments has been conducted at upper educational levels. Little seems to have been reported dealing specifically with children's perceptions of human environments.

Results from research studies which do exist seem to establish the following trends or conclusions:

1. The environment is considered to be made up of perceived aspects which constitute a probable stimulus for promoting particular individual characteristics.

2. Behavior is a function of the transactional relationship between the individual and his environment.

3. The perceptions of individuals living in an environment are a source of valid description of that environment.

In light of the foregoing assumptions a study designed to assess pupils' perceptions of the educat onal environment seems worthy. A study of this nature should provide new insight into situational determinants of social, physical, and intellectual significance--thus assisting the staffs of schools in the planning of relevant educational programs.

The Problem

The central problem of this study was to describe the educational environment of Oklahoma elementary schools as perceived by pupils who attend those schools, and to determine whether schools with differing characteristics differ in their educational environments. Specifically, answers to the following questions were sought:

1. Do elementary schools differ in their educational environment as perceived by pupils
   a. when the school enrollments differ?
   b. when the demographic features differ?
   c. when the socio-economic composition differs?
   d. when the sex of the principals differ?

e. when the age of the teaching staffs differ?

f. when the organizational plans differ?

g. when open space facilities differ?

Method

Subjects

Eleven thousand pupils from three hundred seventy-three classrooms in one hundred ten different schools from throughout the state of Oklahoma participated in the study. This represents nine and one-half percent of all schools in Oklahoma. Because all of the schools who were invited to participate in the study did not choose to do so or in some cases were prevented from returning the completed answers due to school dismissal for summer recess, the one hundred ten schools does not represent a random sample of all schools in Oklahoma.

However, plotting the one hundred ten schools on a map of Oklahoma by county provides a visual indication that the schools are indeed spread throughout the state. The schools in the sample that participated are located in forty-nine of the seventy-seven counties.

Instrumentation

In order to answer the research question, it was necessary to measure the perceptions of a large number of elementary school pupils toward their educational environment. The selected instrument utilized was the Elementary School Environment Survey (ESES) (Sinclair, 1968).

The Elementary School Environment Survey was adapted from the College and University Environment Scales (CUES) developed by Pace (1965). The ESES consists of statements about elementary schools.

These statements about the instruction, curricula, rules and regulations, teachers, pupils, and other features of school life are used to describe the environment as pupils view it. There are statements for each of five variables. The variables are:

Practicality--Procedures, personal status, and practical benefits are important. Status is gained by knowing the right people, being in the right groups, and doing what is expected.

Community--A friendly, cohesive, group-oriented school life is characteristic. The environment is supportive and sympathetic.

Awareness--There is an emphasis upon self-understanding, reflectiveness, and identity. There is a wide range of opportunities for creative and appreciative relationships to the arts. A concern about events around the world, the welfare of mankind, and the present and future condition of man is evident.

Propriety--The environment is polite and considerate. Caution and thoughtfulness are evident. There is an absence of demonstrative, assertive, rebellious, risk-taking, inconsiderate behavior.

Scholarship--An academic, scholarly environment with the emphasis upon competitively high academic achievement. Intellectual speculation, and interest in ideas as ideas, knowledge for its own sake, and intellectual discipline are characteristic of the environment.

Pace, in a rigorous analysis of the psychometric properties of the College and University Environment Scales, found that the substance or content of the measure is representative of the environment being considered. The same environmental dimensions and essentially the same statements employed by Pace's instrument constitute the ESES. Therefore,

Sinclair (1968) has judged the ESES to have a high degree of content validity.

Construct validity is concerned with the degree of relationship between a defined construct or theory and measures of other identifiable features. Pace found that the correlations between CUES and other institutional data were supportive of associations one might expect. Sinclair reached the conclusion from such associations that the theory employed in CUES is backed by a good deal of construct validity and therefore, to a limited degree, the ESES also shows construct validity.

Because of the low variance in a distribution of scores within a given institution by design of the ESES, it was not possible to estimate reliability for a single institution. It was possible to plot a distribution of scores obtained from different schools. The variance of the distribution of the different schools was computed to arrive at a Kuder-Richardson reliability estimate (Sinclair, 1968). The mean scores, the standard deviations, and the Kuder-Richardson reliability estimates were computed according to Formula 21. The reliabilities are uniformly high for Community, Awareness, and Propriety. Practicality and Scholarship have only moderate reliability scores.

Procedure

The data collected by the ESES was used to determine each pupil's perception of the educational environment of his or her school. A pilot study was conducted first to validate the written instructions to teachers for administering the ESES.

Schools selected to participate in the study were chosen by a random sample from all of the elementary schools in the state of

Oklahoma, and the administrators were contacted by letter and invited to participate in the study. A cover letter endorsing the study was secured from the Oklahoma Association of Elementary School Principals.

A letter of acknowledgement was mailed to each school that accepted the invitation to participate in the study. Later the investigator mailed copies of the instrument, answer sheets, and instructions for their use to the schools who agreed to participate in the study. Upon receiving the completed answer sheets from the participating schools, the responses of the pupils were transferred to data cards by an IBM 1230 Optic Reader.

Statistical analysis of the data was made through the use of the Mann-Whitney U test (Siegel, 1956, p. 120) for categories that were limited to two dimensions, namely demographic features, socio-economic composition, sex of school principal, and amount of open space facilities. Statistical analysis for the data that were identified as having more than two dimensions, namely, enrollment size, age range of teacher, and organizational plans, was made through the use of the Kruskal-Wallis test (Siegel, 1956, p. 185). The level of confidence was set at the .05 level.

Results

An analysis of elementary school children's perceptions was undertaken to determine if significant differences existed when schools were grouped together by differing characteristics of those schools. Tables I and II present the data as these were analyzed by the Mann-Whitney U test for schools grouped together by socio-economic composition and demographic features. The data is categorized in these tables by the

five dimensions of the profile. The dimensions which evidenced statistically significant differences at or beyond the .05 confidence level are underlined.

Table III presents the data as these were analyzed by the Kruskal-Wallis test for schools grouped together by organizational plans. The data are categorized in the table by the five dimensions of the profile. The dimension which evidenced statistical difference at or beyond the .05 confidence level is underlined.

Insert Tables I, II, and III about here

Findings

The findings of this study considered to be most significant were the following:

1. Schools located in middle or high socio-economic class settings and designated as non-Title I schools have a significantly more academic, scholarly environment. Table IV shows, in profile form, the differences in Title I and non-Title I schools.

Insert Table IV about here

TABLE I

A SUMMARY OF COMPUTED U VALUES RESULTING FROM THE MANN-WHITNEY U TEST RELATIVE TO TITLE I AND NON-TITLE I SCHOOLS

Dimension	U Value	Z Score	Probability	Significant at:
Practicality	1314.00	-1.10204	.27044	N.S.
Community	1298.00	-1.19547	.23190	N.S.
Awareness	1281.00	-1.29632	.19486	N.S.
Propriety	1218.50	-1.68140	.09268	N.S.
Scholarship	1143.50	-2.13737	.03256	.05

TABLE II

A SUMMARY OF COMPUTED U VALUES RESULTING FROM THE MANN-WHITNEY U TEST RELATIVE TO URBAN AND RURAL SCHOOLS

Dimension	U Value	Z Score	Probability	Significant at:
Practicality	1475.00	-0.15236	.87890	N.S
Community	1425.00	-0.45545	.64878	N.S.
Awareness	1428.00	-0.43637	.66258	N.S.
Propriety	1176.50	-1.96715	.04916	.05
Scholarship	1414.00	-0.52273	.60116	N.S.

TABLE III

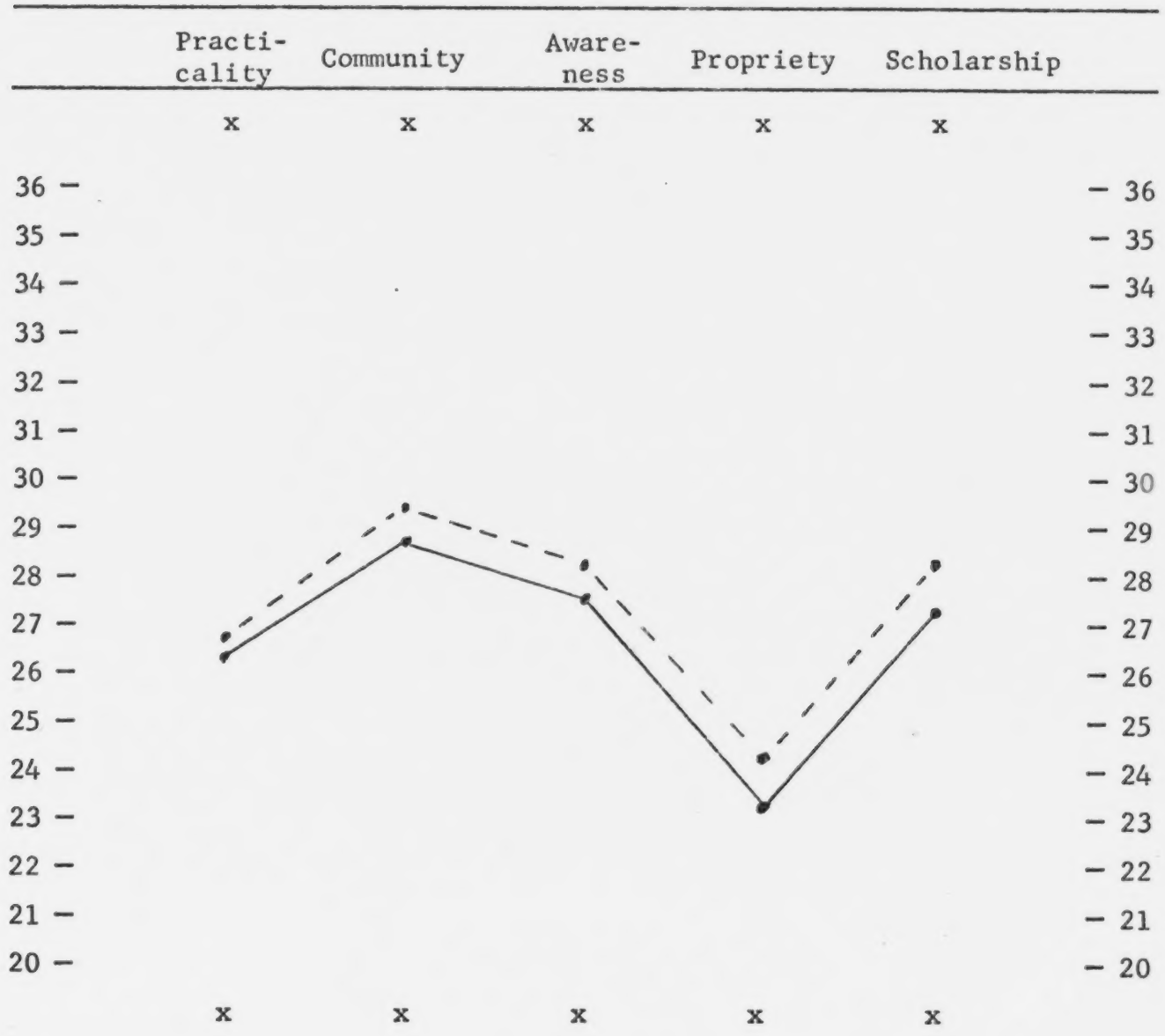
A SUMMARY OF COMPUTED H VALUES RESULTING FROM THE KRUSKAL-WALLIS TEST RELATIVE TO THE ORGANIZATIONAL PLANS OF THE SCHOOLS

Dimension	Average Rank					H Value df = 2	Significant at:
	Self-Contained Classrooms n = 51	Ability Grouped Classrooms	Nongraded Classrooms	Team Teaching	Departmentalized Classroom n = 51		
		n = 8*					
Practicality	47.32	55.25			63.72	6.941	.05
Community	55.01	67.06			54.18	1.177	N.S.
Awareness	53.81	53.75			57.46	0.366	N.S.
Propriety	53.70	45.25			58.91	1.613	N.S.
Scholarship	55.05	57.88			55.58	0.056	N.S.

*Because of the small number of cases in the classifications of Ability Grouped Classrooms, Nongraded Classrooms, and Team Teaching, it was necessary to collapse the three into one cell before the computer could compute a meaningful H value.

TABLE IV

ELEMENTARY SCHOOL ENVIRONMENT PROFILE RELATIVE TO
THE SOCIO-ECONOMIC COMPOSITION OF SCHOOLS



Key:
Title I Schools ————————
Non-Title I Schools — - — - —

2. Rural school students perceive the environment as significantly more polite and considerate than do students attending urban schools. Table V shows, in profile form, the differences in urban and rural schools included in the study.

Insert Table V about here

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3. Self-contained classrooms, when compared with departmentalized classrooms and a group of classrooms that are either non-graded, ability grouped, or part of a team teaching unit, differ significantly in the educational environment dimension of Practicality. Table VI shows, in profile form, the differences in schools with different organizational plans.

Insert Table VI about here

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4. Educational environments of elementary schools do not differ significantly according to the variables of sex of principal, age variance of faculties, or enrollment size of the school.

Conclusions

The following conclusions have been drawn from the findings of the study:

1. Elementary schools do have different educational environments.

2. Educational environments as perceived by pupils who make up that environment can be measured.

TABLE V

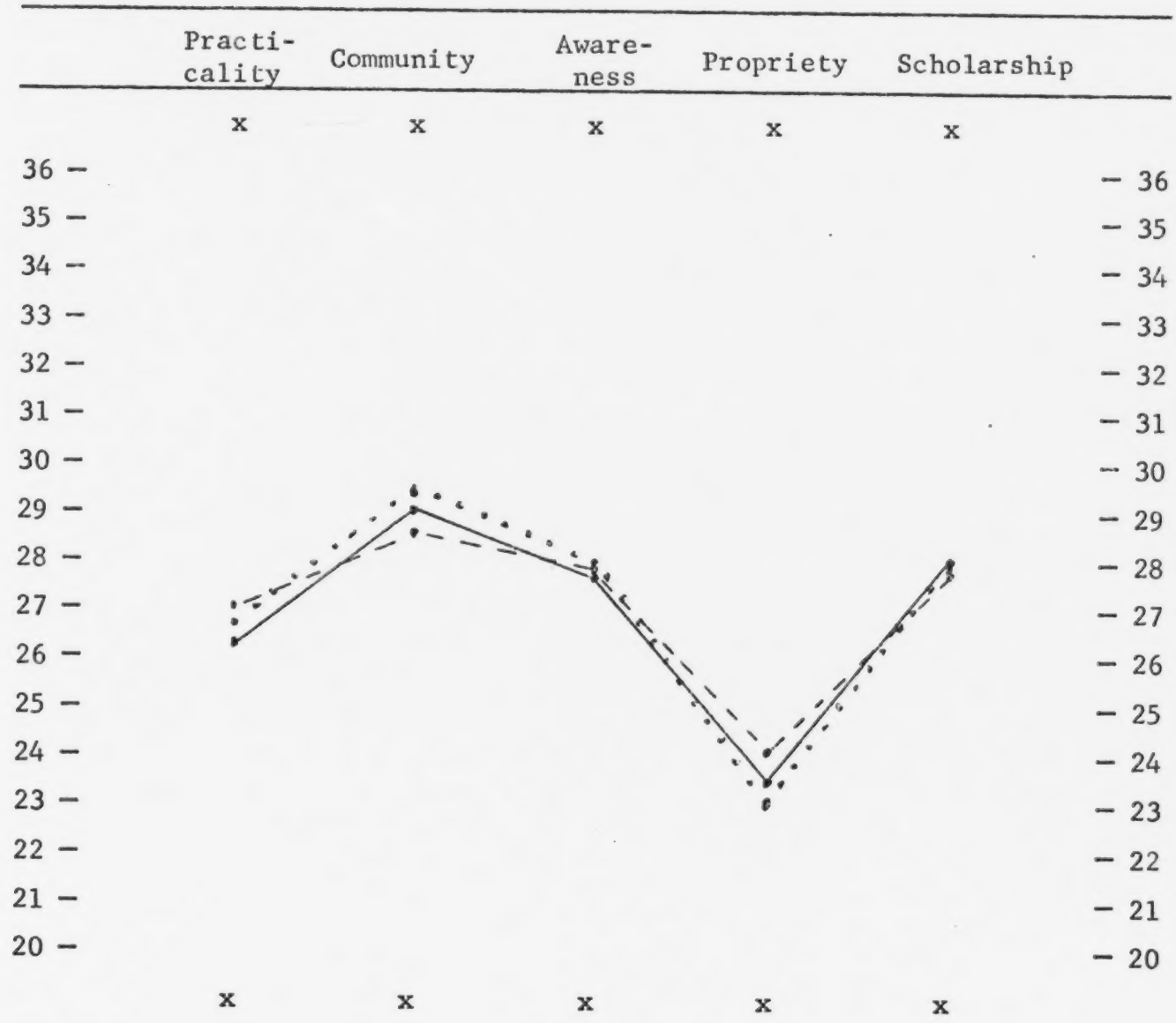
ELEMENTARY SCHOOL ENVIRONMENT PROFILE RELATIVE TO THE DEMOGRAPHIC FEATURES OF SCHOOLS

	Practicality	Community	Awareness	Propriety	Scholarship	
	x	x	x	x	x	
36						36
35						35
34						34
33						33
32						32
31						31
30						30
29						29
28						28
27						27
26						26
25						25
24						24
23						23
22						22
21						21
20						20
	x	x	x	x	x	

Key:
Rural Schools ————
Urban Schools — — — —

TABLE VI

ELEMENTARY SCHOOL ENVIRONMENT PROFILE RELATIVE TO THE ORGANIZATIONAL PLANS OF THE SCHOOLS



Key:
Self-Contained Classrooms ————————
Departmentalized Classrooms - — - — — —
Others (Ability Grouped, Nongraded, Team Teaching) · · · · · · ·

3. Enrollment size of the school does not seem to influence the perceived educational environment.

4. Teacher education, both pre-service and in-service, needs to emphasize the relationship between the learning process and the perceived educational environment of the pupils constituting that environment.

5. More decisions regarding children's learning experiences should be based on the assumption that for pupils their perception is the reality of the situation.

Discussion

When the schools, attending by the participating pupils, were grouped together along the seven traditional independent variables used in the present study for the purpose of identifying significant differences in the way pupils perceive schools, there were only three significant differences found out of a possible thirty-five. An initial conclusion very easily could be--schools are all nearly the same. Another initial conclusion reached may be that all children perceive school almost the same regardless of the characteristics of their school.

An analysis of why these things seem to be so may lead some to say that the wrong questions were asked of the pupils. Others may say the questions are the right ones, implying that pupils in the state of Oklahoma perceive their educational environments as the same.

A more astute conclusion is that the wrong variables were used to identify the real differences that professional educators intuitively know exist in different schools.

Certain implications for curriculum development and teacher preparation would seem to grow out of the findings of a study of this

nature. There must be continued emphasis on the importance of giving attention to all aspects of a child's environment. How children interact with their environment should also be taken into consideration if effective educational planning is to result.

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